

Appl. No. 10/709,003
Amdt. dated October 18, 2005
Reply to Office action of August 24, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

- 1 (currently amended): A clock signal generating circuit for receiving a phase-modulated
5 input signal to generate a non-phase-modulated target clock signal, the clock signal
generating circuit comprising:
a comparing circuit for generating a combining signal according to peak values of
the input signal and comparing the combining signal with a reference voltage
to generate a first protection signal; and
10 a phase lock loop (PLL) electrically connected to the comparing circuit for
receiving the input signal and the first protection signal to generate the target
clock signal that is a feedback to an input end of the phase lock loop, for
driving the target clock signal synchronous to the input signal according to a
first logic level of the ~~input~~ first protection signal, and for not driving the
15 target clock signal synchronous to the input signal according to a second logic
level of the ~~input~~ first protection signal to keep outputting the target clock
signal.
- 2 (currently amended): The clock signal generating circuit of claim 1 wherein the
20 comparing circuit comprises:
a hold circuit for receiving the input signal to obtain a peak signal and a bottom
signal of the input signal;
a combining circuit electrically connected to the hold circuit for generating the
combining signal according to voltage ~~difference~~ differences between the
25 peak signal and the bottom signal; and
a comparator electrically connected to the combining circuit for comparing the
combining signal with the reference voltage and outputting the first protection

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signal according to a comparing result.

3 (original): The clock signal generating circuit of claim 2 wherein the hold circuit comprises:

- 5 a peak hold circuit for generating the peak signal according to the reference signal;
 and
 a bottom hold circuit for generating the bottom signal according to the reference
 signal.

- 10 4 (original): The clock signal generating circuit of claim 1 further comprising:
 a first band-pass filter for controlling the input signal to correspond to a
 predetermined frequency range before the input signal is inputted into the
 PLL and the comparing circuit; and
 a first slicer having an output end electrically connected to the PLL for slicing the
15 input signal into a square waveform.

- 5 (original): The clock signal generating circuit of claim 4 further comprising:
 an automatic gain controller electrically connected to the first band-pass filter for
 adjusting the amplitude of the input signal by utilizing different gain values;
20 and
 a second band-pass filter having an input end electrically connected to the
 automatic gain controller and having an output end electrically connected to
 the first slicer, the second band-pass filter being used for controlling the
 amplified input signal to correspond to the predetermined frequency range.

- 25 6 (original): The clock signal generating circuit of claim 1 wherein if the voltage
 difference between the combining signal and the predetermined reference voltage is
 not larger than a threshold value, the first protection signal corresponds to the first

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logic level.

7 (currently amended): The clock signal generating circuit of claim 1 wherein the first
protection signal corresponds to the first logic level when the voltage difference
5 between the combining signal and the predetermined reference voltage is not larger
than a threshold value for ~~predetermined times~~ a predetermined period of time.

8 (original): The clock signal generating circuit of claim 1 wherein the first protection
signal corresponds to the second logic level when the voltage difference between the
10 combining signal and the predetermined reference voltage is larger than a threshold
value.

9 (currently amended): The clock signal generating circuit of claim 1 wherein the first
protection signal corresponds to the second logic level when the voltage difference
15 between the combining signal and the predetermined reference voltage is larger than a
threshold value for ~~predetermined times~~ a predetermined period of time.

10 (original): The clock signal generating circuit of claim 1 wherein the optical disc drive
comprises an address in pre-groove decoder for predicting a timing that the input
20 signal forms the phase modulation, and for generating a second protection signal
before a predetermined time interval to the timing to control the target clock signal
not to be synchronous with the input signal to maintain the target clock signal.

11 (currently amended): A clock signal generating method for generating a
25 non-phase-modulated target clock signal according to a phase-modulated input signal,
the clock signal generating method comprising:

determining whether ~~adjusting to adjust~~ the phase of the input signal to be
synchronous with the phase of the target clock signal according to a first

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protection signal, for outputting a control signal;
outputting a control voltage according to the control signal;
adjusting the frequency of the target clock signal according to the control voltage;
and
5 generating the first protection signal according to voltage differences between a
combining signal generated from peak values of the input signal and a
reference voltage.

12 (original): The clock signal generating method of claim 11 wherein the step of
10 generating the first protection signal comprises:
getting a bottom signal and a peak signal of the input signal;
generating the combining signal according to voltage differences between the peak
signal and the bottom signal; and
comparing voltage differences between the combining signal and the predetermined
15 reference voltage to output the first protection signal.

13 (original): The clock signal generating method of claim 11 wherein the input signal is
compared with the target clock signal to drive the target clock signal synchronous
with the input signal when the first protection signal corresponds to a first logic level,
20 and the target clock signal is maintained without being driven to be synchronous with
the input signal when the first protection signal corresponds to a second logic level.

14 (original): The clock signal generating method of claim 13 wherein if the voltage
difference between the combining signal and the predetermined reference voltage is
25 not larger than a threshold value, the first protection signal corresponds to the first
logic level.

15 (currently amended): The clock signal generating method of claim 13 wherein the first

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protection signal corresponds to the first logic level when the voltage difference between the combining signal and the predetermined reference voltage is not larger than a threshold value for ~~predetermined times~~ a predetermined period of time.

5 16 (original): The clock signal generating method of claim 13 wherein the first protection signal corresponds to the second logic level when the voltage difference between the combining signal and the predetermined reference voltage is larger than a threshold value.

10 17 (currently amended): The clock signal generating method of claim 13 wherein the first protection signal corresponds to the second logic level when the voltage difference between the combining signal and the predetermined reference voltage is larger than a threshold value for ~~several times~~ a predetermined period of time.

15 18 (original): The clock signal generating method of claim 17 further comprising:
predicting the timing when the input signal forms the phase modulation, and
generating a second protection signal before a predetermined time interval to the
timing to control the target clock signal not to adjust the input signal for maintaining
the target clock signal.

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